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Energy tax reform in Russia and other former Soviet Union countries

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[Headnote]

The taxation of oil and gas production and consumption has become an important fiscal issue in most countries of the former Soviet Union. How can these countries modify the taxation of their energy sectors to increase fiscal revenues, improve efficiency, and encourage foreign investment?

THE COUNTRIES of the former Soviet Union are typically large consumers of energy, and four of them-Azerbaijan, Kazakhstan, Russia, and Turkmenistan-are large producers of oil and gas. Revenues from the petroleum sector averaged about 4.5 percent of GDP in Russia, Azerbaijan, Kazakhstan, and Turkmenistan during 1993-96, compared with between 10 and 30 percent of GDP in oil producers elsewhere. Many observers have asked whether the sector is being taxed sufficiently, while others have complained that it is overtaxed.

Large oil and gas reserves

The existing petroleum reserve base in-former Soviet Union countries is very large and could support significantly higher production and exports. Russia has one-fourth of the world's proven gas reserves and is the world's largest producer of natural gas. Turkmenistan has the sixth-largest gas reserves in the world. Russia has an estimated one-seventh (6.7 billion tons) of the world's proven oil reserves outside the Middle East, which is comparable to the oil reserves of Mexico. It is the world's third-largest oil producer, with an output of 300 million tons in 1996. Production has fallen 45 percent, however, since the peak year of 1988. Azerbaijan and Kazakhstan each has oil reserves about one-sixth those of Russia. Oil production in these two countries could double or triple once oil export pipelines are built from the Caspian Sea fields.

Gas surplus but tight oil supply Gas supply in the region is dominated by production from a few large, low-cost fields owned and operated by the monopoly Gazprom. Gas sales are demand constrained, since demand for gas in the region has declined and there are surpluses of gas in western Kazakhstan, Russia, and Turkmenistan. Demand for energy in the former Soviet Union has fallen owing to recent declines in GDP, energy price increases, and some improvement in what has characteristically been inefficient use of energy in the region's economies. One-tenth of the gas produced in Russia is exported to Western Europe, where it satisfies one-fourth of Western European demand. Ukraine is the main country through which Russian gas flows to foreign markets.

There is scope for some increased gas exports from countries of the former Soviet Union, but concerns about security of supply and limited expansion of the gas market are likely to prevent a large-scale expansion of gas exports. Since Russia's gas sector produces large amounts of low-cost gas and is a monopoly, it should generate significant revenues from sales and, potentially, large tax revenues.

The supply and demand conditions and market structure for oil are very different from those for gas. Oil is supply constrained. Production of oil in the former Soviet Union countries (which comes

overwhelmingly from old fields) has been declining owing to poor production practices and low investment. Output stabilized in 1997. Production could be increased from old fields and completely new oil fields, particularly those in the Caspian Sea region.

Ownership change

In Russia, ownership and control of substantial oil and gas assets have been transferred to new domestic owners and managers. The energy sector was privatized in a nontraditional manner by issuing and trading vouchers encompassing large stakes in oil, gas, and power companies and by other means. Oil and gas sector assets were privatized between 1992 and 1996 for a total budgetary contribution of less than \$1.5 billion. These assets are worth an estimated \$50-60 billion, based on their market value in mid-1997, and significantly more if they were properly revalued. In Russia, private owners received majority equity stakes in oil companies that account for 85 percent of oil production. Joint ventures with foreign partners account for only about 7 percent of the country's oil production. Sixty percent of gas sector assets (all of them controlled by Gazprom) were privatized, with managers of gas-producing companies and residents of gas-producing regions receiving a large part of the shares. The assessed value of Gazprom at the end of 1996 was \$119 billion, excluding gas reserves.

Azerbaijan and Kazakhstan have attracted large-scale private foreign investment to develop large, new oil fields in and around the Caspian Sea. The state oil company in Azerbaijan has not been privatized, but part of the Kazakh oil sector has been privatized using traditional cash sales of shares and investment tenders.

The enterprises in the former Soviet Union countries' energy sectors have another unusual characteristic. They began the transition without significant amounts of debt obligations as counterparts to their large assets. The absence of significant obligatory interest and amortization payments adds to their potential to generate positive cash flow. The common practice, in market economies, of debt injection or converting a significant part of enterprise equity into debt (which would become a revenue-earning asset for the ministry of finance) before privatization, however, was not part of the privatization process in countries of the former Soviet Union. (In the United Kingdom, this practice accounted for one-fifth of receipts from the privatization of utilities.) In the gas sectors of the former Soviet Union countries, low costs and the absence of debt have generated large rents.

Fiscal regime in market economies

The rationale for the taxation of energy supply (production and delivery) in market economies is twofold. First, the government as sovereign tax authority should collect as much of the "economic rent" as possible through taxes that are as neutral as possible. These rents are surplus revenues that remain after allowing for all costs and a minimum return to the owner or investor. The more revenue that can be raised through the taxation of these rents, the less revenue the government will need to raise by using distortive taxes on goods, factors of production, or asset transactions. Second, government owns the resource and needs to receive an appropriate royalty or fee for its use.

The approach used in market economies is to tax petroleum production using multiple fiscal instruments to balance risk and return between government and investors, and to introduce flexibility as energy prices vary. These include value-added taxes (VATs), profits taxes, fees, and additional profits taxes. Taxes are collected primarily at the point of production, and fees for the transportation of energy are regulated to prevent monopoly pricing. Countries also tax consumption of petroleum products, such as gasoline and diesel fuel, to raise revenue, improve income distribution, cover road user fees, and

protect the environment.

The emphasis in the countries of the former Soviet Union has been on production-based levies, low excise taxes on petroleum products, and-until recently-export duties. Also, weak regulation of energy transportation has allowed significant rents to accrue to the transporting firms, thereby lowering prices received by producers. Reforming taxation of petroleum production involves establishing a new, flexible fiscal regime that balances the government's immediate need for revenue against the need for efficient incentives for new investment, along with an effective and nondiscriminatory system of regulation for oil and gas transportation.

Low energy tax burden

Former Soviet Union and other petroleum producers
International comparison of revenues from oil and gas and of relative tax burdens, 1996
(except U.S.D.)

	Former Soviet Union	Indonesia	Russia	Poland	Other producers ¹
Production-based levies ²	1.00	1.00	0.60	0.20	0.50-90
General taxes	0.00	0.75	1.70	0.00	0.00-0.5
Consumption-based levies ³	0.00	0.00	0.00	0.00	0.00-0.5
Total	1.00	1.75	2.30	0.20	0.50-90
Relative tax burden ⁴	1.00	1.75	2.30	0.20	0.50-90
Relative tax burden ⁵ (excluding VAT and excise taxes)	1.00	1.75	2.30	0.20	0.50-90

¹ Former USSR and CIS countries.
² Includes production-based levies, royalties, and other taxes on production.
³ Includes consumption-based levies, excise taxes, and other taxes on consumption.
⁴ Relative tax burden is calculated as the ratio of the total tax burden to the sector's share in GDP.
⁵ The relative tax burden is a ratio of the total tax burden to the sector's share in GDP, excluding VAT and excise taxes.

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Former Soviet Union and other petroleum producers

How do the composition and burden of taxes on the oil and gas sectors in the countries in this region compare with those in other energy producers? The tax burden on the petroleum sector should generally be higher than that on other sectors, for two reasons. First, the government obtains revenue from its resource ownership. Second, in many countries with limited tax administration capability, the energy sector provides one of the few "tax handles" government can "grasp" to secure revenues from a few taxpayers.

A summary of the level and type of taxes for former Soviet Union and other petroleum producing countries is given in the table. Calculations were made of the relative tax burden, defined as the energy sector's share in general revenues divided by the sector's share in GDP. It is a useful measure for comparing the government revenues from various petroleum-rich countries normalized by the sector's share in GDP. The relative tax burden is between 2 and 4 for most countries outside the former Soviet Union. The data presented in the table show several trends:

The relative tax burden for the oil sector in Russia was about 2 in 1996 (at the low end of the range for oil producers outside the former Soviet Union). For other oil producers in the region, the relative tax burden was one-half to two-thirds of the level in Russia.

Since various countries have domestic markets of different sizes, the relative tax burden is also calculated excluding VAT and petroleum product excises. This measure gives a better picture of the tax burden on petroleum production where resource rents normally occur. When both VAT and taxes on consumption are excluded, the relative tax burden for producers in the region is between one-fourth and one-half that in petroleum producers outside the former Soviet Union (because of the low levels of VAT and excise taxation of petroleum products in many of them).

Export taxes, which accounted for half of petroleum sector revenue in Russia in 1993, were eliminated in 1996. Although revenues from the Russian gas sectors have increased since 1993, the relative tax burden of 1.3 (1.1 excluding VAT) in 1996 is low and is significantly lower than that of the Russian oil sector.

The actual revenues from the oil and gas sector were about one-half to two-thirds of producers' notional liability (that is, estimated tax revenues calculated using statutory terms) in Azerbaijan, Kazakhstan, and Russia. Foreign companies largely fulfill their statutory tax obligations, but they account for only 9 percent of the former Soviet Union countries' oil production. In Russia, they have complained about the high tax burden. More than 80 percent of the oil, and 95 percent of the gas, produced in the region, however, comes from recently privatized enterprises (primarily Russian ones), and an additional 11 percent of the region's oil comes from state-owned entities. Privatized enterprises and some state-owned entities together account for most exemptions, arrears, and noncompliance. Also, taxes are frequently paid on a cash basis. Moving taxes to an accrual basis, in line with international practice, would help increase collections.

Issues and reform options

Low fiscal revenues in the oil sector are caused partly by infrastructure constraints and monopoly in oil transport. Additional reasons are inappropriate tax structures (for upstream oil production and downstream taxation of oil products) and weak tax administration. In the gas sector, dominated by Russia's Gazprom, the tax burden remains low because tax rates are low; the structure of taxes does not adequately capture monopoly or resource rents; and tax administration is weak. An unusually large share of rents accrue to the large gas and oil transport monopolies (particularly Russia's Gazprom and Transneft) and is frequently not passed on to the budget.

Infrastructure constraints and monopoly in oil transport. In the oil sector, the retention and waste of revenues within the inefficient system of oil transport and refining lowers the prices received by oil producers and reduces their ability to pay taxes. Reform of oil transport and upgrading of refining capacity would lead to higher prices for oil producers in Russia and nearby countries. This would allow for more investment and higher tax revenue.

Fiscal regime for oil production. Azerbaijan and Kazakhstan have been the first to adopt new fiscal regimes to help attract foreign investment to develop large new oil fields in and around the Caspian Sea. Fiscal arrangements have been agreed in joint venture contracts and new fiscal arrangements have been adopted allowing for production-sharing agreements and taxation of additional profits.

In Russia, the policy framework has not encouraged large-scale foreign investment. There is a high proportion in petroleum taxes of fixed production-based levies, which are frequently imposed in an uncoordinated manner by federal, regional, and local governments. Oil taxation is not flexible and therefore cannot easily be adjusted to take account of variations in oil prices. The draft Russian tax code includes a framework for producers to switch to a new simplified fiscal regime providing for their payment of royalties and taxes on additional profits. Progress is also being made in Russia on legislation and contracts for production-sharing agreements. An improved fiscal regime in the oil sector could eventually add 0.5 percent of GDP a year to Russia's revenues (and stimulate significant increases in production).

Downstream taxation of petroleum products. In countries outside the former Soviet Union, the taxation of petroleum products is an important source of revenue, accounting for between 1 and 3.5 percent of GDP. In most countries of the former Soviet Union, these taxes average less than 1 percent of GDP, but percentages are higher for Azerbaijan and the Baltics. There is considerable scope for increased taxation of consumption of petroleum products in all of these countries. Increasing excise taxes on gasoline and diesel fuel by between \$0.07 and \$0.15 per liter could increase revenues by an estimated

0.5-1.5 percent of GDP in most of these countries. This would bring prices almost up to Canadian levels but still below corresponding levels in Western European countries and the Czech Republic.

Taxation of gas. Russia's Gazprom is one of the world's biggest companies, with gross sales in 1996 of about \$30 billion, half of which comes from sales outside Russia. Tax revenues from the gas sector have recently increased, but the actual tax burden remains low because (1) statutory tax rates are low, and the tax structure does not adequately capture monopoly or resource rents; (2) there is less than full payment of tax obligations; and (3) there is a high share of noncash settlements (such as barter or offsets) by energy consumers, which leads to low reported cash revenues and facilitates tax avoidance. Additional taxation of the gas sector in Russia including increased taxation of upstream gas production and additional taxes appropriate to the current monopoly structure, such as a lumpsum tax—could increase annual revenues by an additional 0.7-1 percent of GDP. In Ukraine, higher taxes on gas transit and production could raise an additional 1-2 percent of GDP.

Regulation and tax administration. Regulations frequently discourage the cutting off of nonpaying energy customers. This has contributed to a significant amount of nonpayment and noncash settlements (barter, offset, and mutual cancellation) for energy and, along with poor tax administration, has led to low reported cash earnings and created avenues for avoiding taxes. Improved regulation and increased efficiency of tax administrations, as well as demonstration of sufficient political will to collect taxes from large producers, can increase revenues.

Conclusion

The energy sector plays a very important role in Russia and other countries of the former Soviet Union. Actual tax revenues from the oil and gas sector in the region, however, are about one-half to two-thirds of what might be expected based on international comparisons. In addition, the budgetary contribution of the privatization of the energy sector has been very small, particularly in Russia. In the oil sector, low tax revenues result from infrastructure constraints on oil exports, weak tax administration, and inappropriate tax structures. Improvements in the fiscal regime for oil production, particularly in Russia, along with reform of oil transport, could boost foreign investment, enhance economic growth, and eventually contribute to higher tax revenues. The fiscal contribution of the gas sector could be increased in Russia and Ukraine. Currently, low fiscal revenues in the gas sector are due to low statutory tax rates, a tax structure that does not capture monopoly or resource rents, and weak tax administration. There is also scope for increased taxation of consumption of oil products in all countries of the former Soviet Union that would bring their tax levels up to those of most other countries.

[Sidebar]

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Suggestions for further reading: Dale Gray, 1998, "Evaluation of Taxes and Revenues from the Energy Sector in the Baltics, Russia, and the Other Former Soviet Union Countries," IMF Working Paper 98/34 (Washington: International Monetary Fund). , 1995, "Reforming the Energy Sector in Transition Economies," World Bank Discussion Paper No. 296 (Washington). David C.L. Nellor and Emil M. Sunley, 1994, "Fiscal Regimes for Natural Resource Producing Developing Countries," IMF Paper on Policy Analysis and Assessment 94/24 (Washington: International Monetary Fund).

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